From:	HOPE Bruce
To:	Eric Blischke/R10/USEPA/US@EPA; Dana Davoli/R10/USEPA/US@EPA; POULSEN Mike; pj.bridgen@eiltd.net; jeremy_buck@fws.gov; Joe Goulet/R10/USEPA/US@EPA; PETERSON Jenn L; Burt Shephard/R10/USEPA/US@EPA; Robert.Neely@noaa.gov; OMEALY Mikell; chris.thompson@eiltd.net; rgensemer@parametrix.com; Ron.Gouguet@noaa.gov
Cc:	jmarsh@parametrix.com; Chip Humphrey/R10/USEPA/US@EPA
Subject:	RE: Preparation for June 6th Meeting - Food Web Model
Date:	05/31/2006 01:46 PM

Eric,

I think you should add a discussion of the dietary matrix to the agenda as this is the principle source of uncertainty in a food web model. In its last two reports, Windward manipulated the dietary fractions (not the items on the "menu" but how much of each item is eaten) to get the results they wanted/needed. Such manipulation can be avoided by requiring a variable dietary matrix (i.e., the menu is fixed but how much is eaten varies stochastically).

It probably isn't an agenda item, but we need to not use the word "precision" with respect to the food web model results. Some of Windward's comments make it sound as though the model will find the one absolutely right value for a PRG. Any model result will have a plus/minus (uncertainty) associated with it. This uncertainty should be made evident before any value is selected to represent a PRG (otherwise you won't know if the value is 95% protective or only 5%). Now that Windward has access to John Toll, they should have the expertise to do this.

Bruce

-----Original Message-----
From: Blischke.Eric@epamail.epa.gov
[mailto:Blischke.Eric@epamail.epa.gov]
Sent: Wednesday, May 31, 2006 1:03 PM
To: Davoli.Dana@epamail.epa.gov; POULSEN Mike; pj.bridgen@envintl.com; jeremy_buck@fws.gov; Goulet.Joe@epamail.epa.gov; PETERSON Jenn L; Shephard.Burt@epamail.epa.gov; Robert.Neely@noaa.gov; OMEALY Mikell; chris.thompson@eiltd.net; rgensemer@parametrix.com; Ron.Gouguet@noaa.gov; HOPE Bruce
Cc: jmarsh@parametrix.com; Humphrey.Chip@epamail.epa.gov
Subject: Preparation for June 6th Meeting - Food Web Model

We just finished a call with the LWG folks regarding the Food Web Model for Portland Harbor. For the June 6th meeting, we are planning to cover the following items:

- Species to be Modeled
- Chemicals to be Modeled
- Model Performance - Objectives and steps necessary to improve model performance
- Spatial Scale - Link to fate and transport segments, How to address the navigation channel, surface area weighted averaging and development of exposure point concentrations
- Modeling Language - Visual Basic vs. Excel

The goal of the meeting is to reach some sort of agreement on the topics identified above. Our focus is the Round 2 Comprehensive Site Summary and Data Gaps Report. In the Round 2 Report, the food web model will be used primarily to develop initial PRGs and refine/confirm the data gaps identified in our December 2, 2005 Round 3 Data Gaps Memo. Further refinement of the food web model to support the BRA and FS will take place based on the results of the Round 2 Report and the collection of additional data. For the topics identified above, I am interested in input as outlined below. Feel free to add any additional issues that you think need to be resolved in order to proceed with the food web model in the Round 2 report.

Species to be Modeled: In our Data Gaps memo, we identified the following species to be modeled: Northern Pikeminnow, Smallmouth Bass, Black Crappie, Largescale Sucker and Sculpin. In addition, benthic tissue must also be included in the food web model. Are these species sufficient? Do we need to model carp to support the HHRA? I would like to present a list of the species to be modeled at the June 6th meeting.

Chemicals to be Modeled: Bruce has proposed the following chemicals - PAHs (a range of 7), metals (mercury, arsenic, others), PCBs (a range of congeners), Dioxins, Pesticides (DDT, DDE and DDD). Do we need to model metals? What are the pros and cons of aroclors vs. congeners? What other pesticides should be included (based on HHRA and ERA screening)? The key area of disagreement is probably whether to do PAHs. From the LWG perspective, there are two concerns with modeling PAHs - most PAHs were not detected in fish tissue and the uncertainty surrounding metabolic rate functions. I would like to present a list of the chemicals to be modeled at the June 6th meeting.

Model Performance: What are our expectations for the food web model in terms of performance? In our comments on the latest iteration of the food web model, we identified a number of steps to improve model performance (e.g., dietary assumptions, Kow's). What other changes should be made to improve model performance?

Spatial Scale: We have broken up the issue of spatial scale into for primary components:

Fate and Transport Segments - what steps are necessary to link the food web model to the fate and transport segments? Given that we will not have the contaminant fate and transport modeling effort fully integrated into the hydrodynamic sedimentation modeling effort until early next year, is this critical to the Round 2 data report?

Navigation Channel: There is a concern that exposure of certain fish species to the navigation channel is limited. In addition, contaminant concentrations in the navigation channel are lower than elsewhere. How should the navigation be addressed to develop the "best" relationship between fish tissue and sediments?

Surface Area Weighted Averages: There are two issues here - what technique to use (if any) and transparency. The question is how to best estimate the average sediment concentration that fish are exposed to.

Exposure Point Concentrations: Exposure point concentrations will vary based on the fish species. For fish with large home ranges, a site-wide average may be appropriate. For sculpin and clams, a point by point comparison to PRGs may be appropriate. For species with an intermediate home range (e.g., smallmouth bass), an EPC for each fate and transport segment may be appropriate. What is the range of exposure point concentrations that should be considered in the round 2 report?

Modeling Language - Visual Basic vs. Excel: Nancy Judd thinks that she can work out the modeling language with Bruce off line.

Please get me your thoughts by the end of the week. I will be meeting with John Marsh tomorrow to begin developing an agenda.

Thanks, Eric